



PATENT SPECIFICATION

Application Date: July 17, 1923. No. 18,429/23.

222,248

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Complete Accepted: Oct. 2, 1924.

PROVISIONAL SPECIFICATION.

Improvements in Means for Supporting Displaying Devices in Shop Windows and other Places.

I, HENRY FRANCIS GARDNER, of 96, Holloway Road, London, N. 7, a British subject, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to means for supporting displaying devices in shop windows and other places. Such devices are frequently displaced by the vibration caused by the ordinary road traffic and my invention is designed to produce an anti-vibration means of support for such articles or displaying devices.

10 According to this invention the displaying glass or other trays or shelves are mounted in a frame comprising side strips having apertures therein to receive supporting rods for the trays or shelves. The frame is attached to a bifurcated

holder secured to a head piece screwing on to the lower end of a tube or rod having a nut or other enlargement at its upper end and mounted in a sleeve which is flared outwards at its upper end and held in an apertured cover plate screwed to the ceiling or other fixed place. 25

Within the sleeve is a coiled spring one end of which bears against the nut or enlargement on the tube or rod and the other end bears against the inwardly flared lower end of the sleeve. 30

Dated this 17th day of July, 1923.

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Patent Agent,

3, John Street, Bedford Row, London, W.C. 1, 35

Agent for the Applicant.

COMPLETE SPECIFICATION.

Improvements in Means for Supporting Displaying Devices in Shop Windows and other Places.

I, HENRY FRANCIS GARDNER, of 96, Holloway Road, London, N. 7, a British subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

40 This invention relates to means for supporting displaying devices in shop windows and other places. Such devices are frequently displaced by the vibration caused by ordinary road traffic or by inadvertently knocking same, and my invention is designed to produce anti-vibration means of support, and which will nullify the effect of any sudden movement.

According to this invention, the displaying glass or other trays or shelves 55 are mounted in a frame comprising side strips having apertures therein to receive rods or bars for the trays or shelves. The frame is attached to a bifurcated holder secured to a head piece screwing on to the lower end of a tube or rod having a nut or other enlargement at its upper end and mounted in a sleeve which is flared outwards at its upper end and held in an apertured cover plate screwed to the ceiling or other fixed place. 60

Within the sleeve is a coiled spring one end of which bears against the nut or enlargement on the tube or rod and the other end bears against the inwardly flared lower end of the sleeve. 65

This arrangement provides a flexible 70

[Price 1/-]

support allowing of sufficient swivelling or sideways movement, also carrying the weight of framework with display shelves suspended by means of the spring, thus absorbing the effect of vibration or sudden jar, so that articles placed upon display shelves are not displaced.

The construction of suspending the frame from above also allows greater accessibility to objects in the window, which is not possible with the usual type of fittings with projecting side supports or bars.

Several applications to different models are illustrated in the accompanying drawings in which

Fig. 1 shows a perspective view of one arrangement.

Fig. 2 a vertical section through the head piece Fig. 1.

Fig. 3 shows a detail of attachment of the shelf supporting cross bars to the framework strips detached, and Fig. 4, shows same in position.

Figs. 5 and 6 are similar views to Figs. 3 and 4 of a modified form.

Fig. 7 is a perspective view of the display device adapted to traverse longitudinally along an angle bar.

Fig. 8 a vertical section of fitting head and angle bar mounting.

Figs. 9 and 10 a vertical section and plan respectively of the angle bar mounting adapted to be moved laterally.

Fig. 11 shows a sectional detail of a head piece of modified form.

Fig. 12 is a perspective view of the device applied to the usual type of standard bar and fittings.

Fig. 13 shows a horizontal section of a spring buffer in Fig. 12 necessary to counteract effect of weight on shelves when my improved head piece is applied to the standard fittings.

Fig. 14 a perspective view showing detail of fitting to standard bar obviating use of the buffer shown in Figs. 12 and 13.

Fig. 15 a perspective view of device applied to a corner fitting.

Referring now to Figs. 1 and 2, 1, 1, are the sleeves flared outwardly at 2, at the upper ends, and loosely held in cover plates 3, by an inwardly flared portion 4, the cover plates 3, being screwed to the ceiling or other fixed place.

Within the tubes 1, is a coiled spring 5, supporting a nut 6, screwed to a rod 7, the lower end of which is bifurcated at 8, having a grub screw 9, upon which the frame strips 10 are suspended.

A ball race 11, may be provided at the nut end of rod 7, to lessen friction.

The lower end of the sleeves or tubes

1, are turned inwardly to retain the spring 5, and surround a shield 12 with a tubular extension 13, loosely positioning the rod 7, and preventing the spring 6 binding on same.

The frame strips 10, have rectangular holes 14, pierced at intervals into which are fitted crossbars 15, supporting glass shelves or plates 16, notches 17, are provided in crossbars 15, so that when engaged in the frame strips 10 serve to lock same at a suitable distance apart as clearly shown in the disengaged, and engaged position in Figs. 3 & 4, respectively.

Figs. 5 & 6 the frame strips 10¹ have circular holes 14¹ engaging with circular grooves 17¹ turned on the cross-bars 15¹, a distance piece or tube 18, of rubber or the like may be provided.

In Figs. 7 and 8 the head piece 19 is provided with an inverted V shaped slot 20, adapted to traverse along an angle bar 21, screwed by means of a fitting 22, to the ceiling or other fixed place.

Only one head piece with a centrally disposed rod 22^a, carrying the glass display plate 16, is shown in Fig. 7, but it is to be understood that two or more fittings similar to that shown in Fig. 1, can be adapted to be fitted to the angle bar 21.

The cover plate 3 as shown is bolted to a similar plate 3¹ with inwardly and upwardly flared portion 4¹ surrounding a head 23 of a rod 24, screwed to the head piece 19. This arrangement permits of the display device responding to any swivelling or sideways movement.

In Figs. 9 & 10 the angle bar 21, is screwed to a fitting 22¹ provided with a roller 25 moving in a slotted head piece 26, thus allowing the display device to be moved within certain limits to any desired position.

In the case where unequal loading of the display shelves or plates 16 is necessary, a fixed holder 19¹ which can only respond to vertical movement is illustrated in Fig. 11. The holder 19¹, being rigidly secured to the tube 1, in which the nut 6, is a sliding fit, the lower end of the tube 1, being inwardly turned to surround the rod 22^a. This construction restricts the sideways movement of the rod 22^a, and the attached shelves. Figs. 12 and 13 show my improved holder having suspended therefrom the usual type of standard fittings consisting of a perforated bar 27, carrying a bracket 28, which supports the plates 16.

It is however, necessary to provide a buffer to counterbalance the weight of objects placed upon the shelves which may consist of a spring 29 mounted in a

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fixed casing 30 acting against an adjustable fork end piece 31, carrying a flanged roller 32, bearing on the edge of the standard bar 27.

5 The standard bar 27, shown in Fig. 14 passes centrally through a hole 33, provided in the plate 16 and has a flanged collar 34, secured by means of a thumb screw 35, on the underside of the plate. Projecting from the collar 34, are two rods or arms 36, carrying at their outer ends rubber sleeves 37, upon which the glass plate 16 rests, which being thus centrally supported will not swing to one side when weight is placed thereon.

15 In Fig. 15 an example of corner fitting is shown with the holder 1, supported from a bracket 38, screwed to the side walls. Yielding flexible strips 39, having rollers 40 at their outer ends bearing on the side walls, are shown fixed to the plate supporting rod.

20 The various foregoing means of attachment of my improved support for display devices are illustrated and described by way of example only of how my said invention may be carried into practice and it is to be understood that other suitable means may be provided without departing from the spirit or scope of my said invention.

25 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

30 1. A means of support for window or the like display devices consisting of a spring supported framework carrying the display plates or shelves, the said spring support being located in a loosely mounted tube or casing which will readily allow of the framework and attached parts carrying plates or shelves

to respond to vibration or movement without displacing articles thereon substantially as described.

2. Means of support for window or the like display devices according to Claim 1, in which the support is adapted to traverse along on angle bar or the like which itself may be movable in order that the support may be moved to any desired position.

3. Means of support for window or the like display devices according to Claim 1, in which a spring buffer is provided to permit of unequal loading of the plates or shelves, said buffer carrying a roller or rollers to allow of vertical movement of the display device for the purpose set forth.

4. Means of support for window or the like display devices according to Claim 1, in which when having attached thereto the standard or usual type fitting or bar centrally disposed with relation to the glass display shelf is provided with a collar having arms projecting to support the display shelves in order to retain the shelves in position during any movement of the flexible supporting means.

5. Means of support for window or the like display devices according to Claim 1, in which the framework has provided apertures therein engaging with notches or grooves in the rods, or bars supporting the plates or shelves, said notches serving to locate the framework strips at any suitable distance apart.

6. Means of support for window or the like display devices substantially as described and illustrated for the purpose set forth.

Dated this 17th day of April, 1924

HENRY FRANCIS GARDNER.

H. F. GARDNER, Usual Signature,
96, Holloway Road, London, N. 1.

[This Drawing is a reproduction of the Original on a reduced scale]

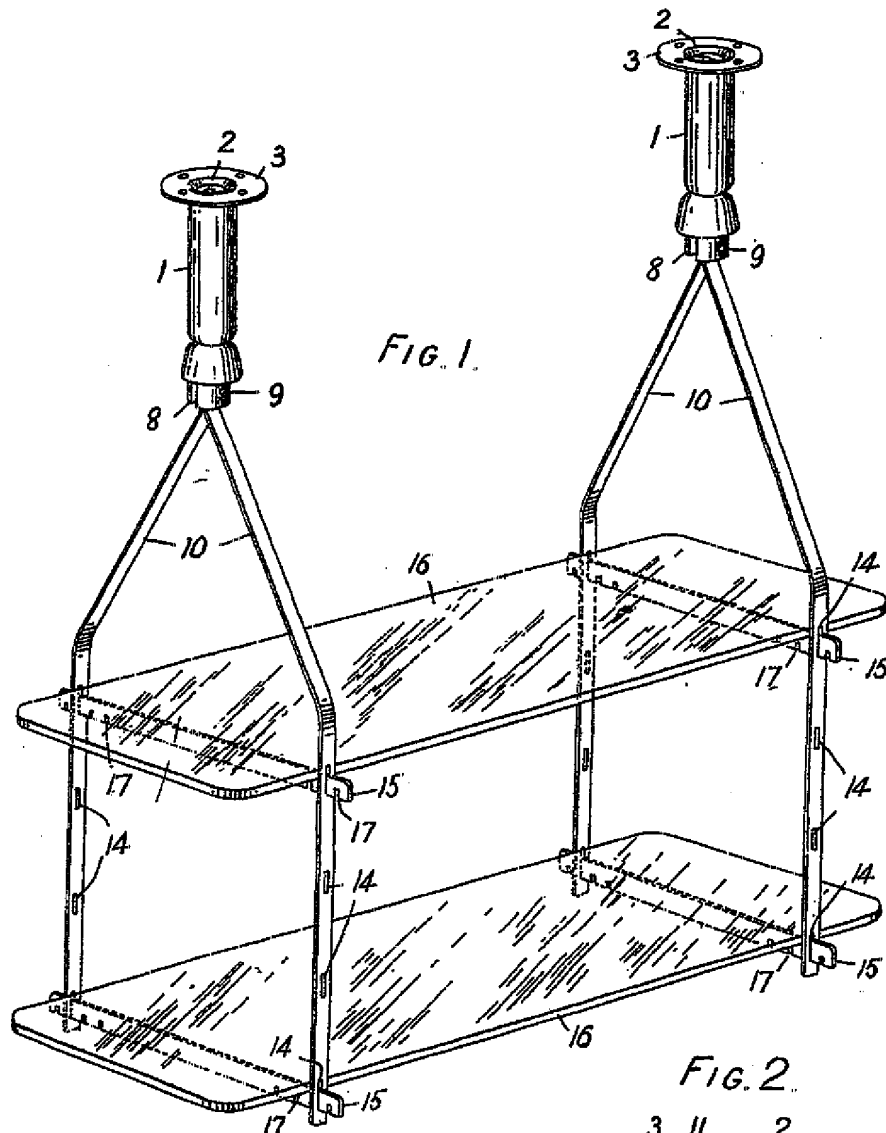


FIG. 1.

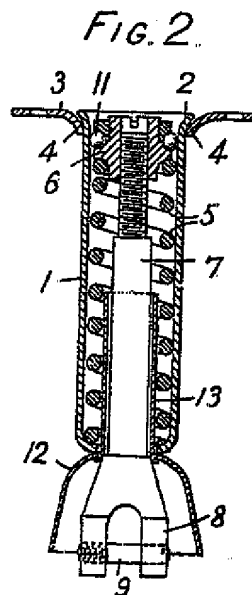


FIG. 2.

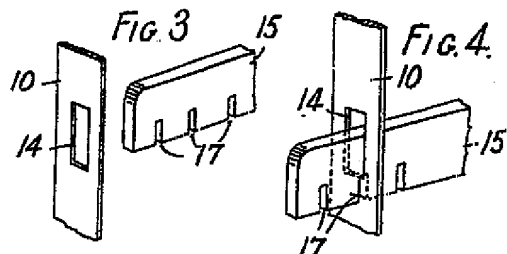


FIG. 3.

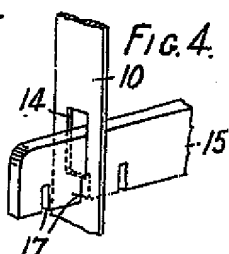


FIG. 4.

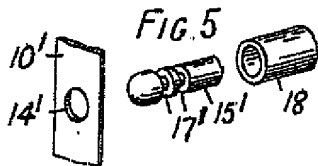


FIG. 5.

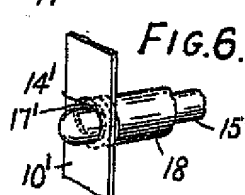


FIG. 6.

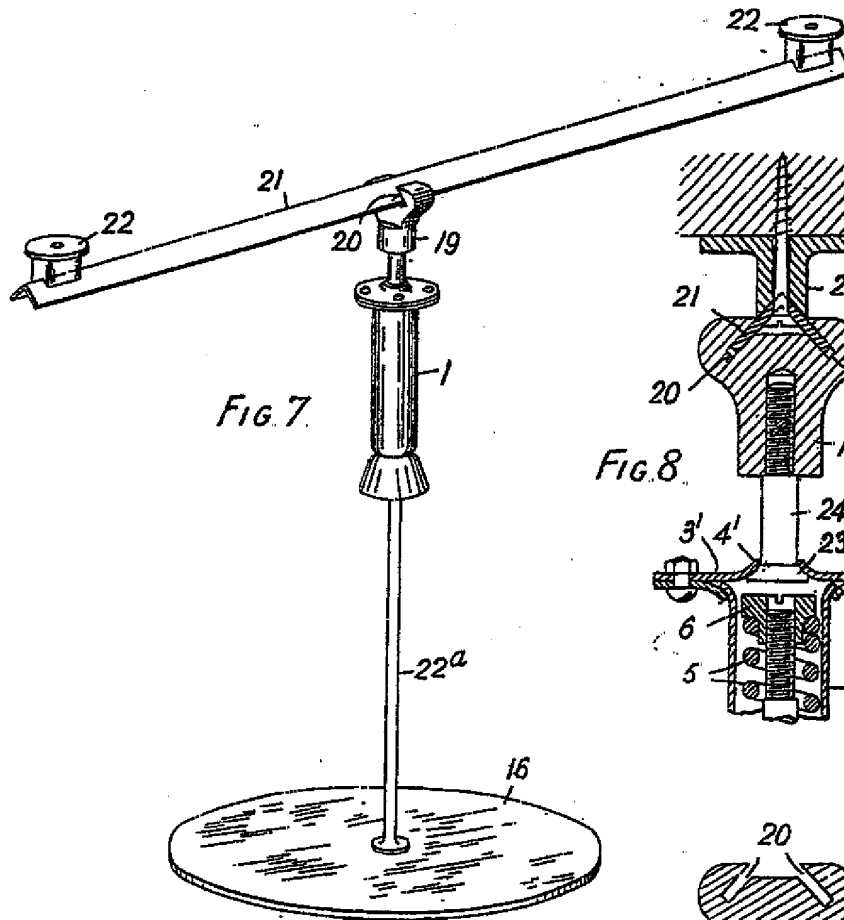


FIG. 7.

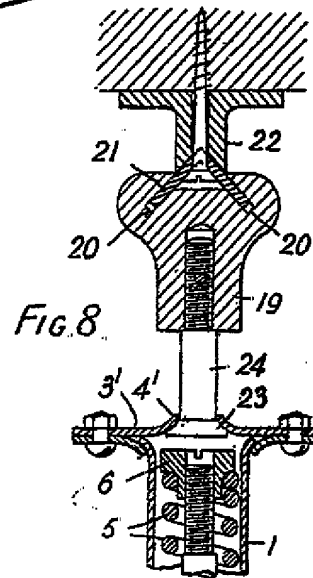


FIG. 8.

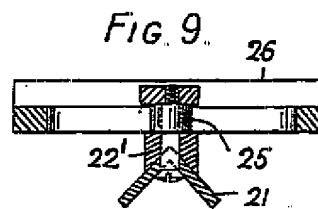


FIG. 9.

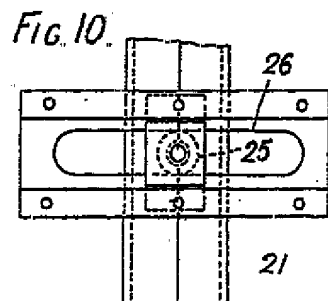


FIG. 10.

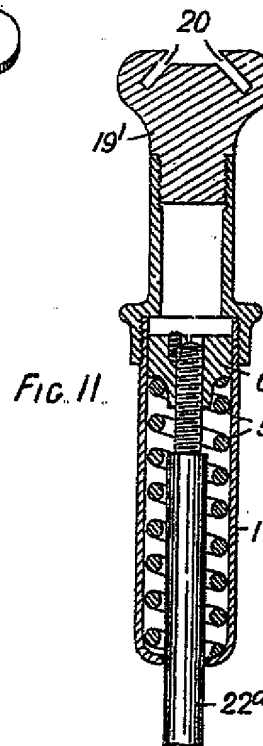


FIG. 11.

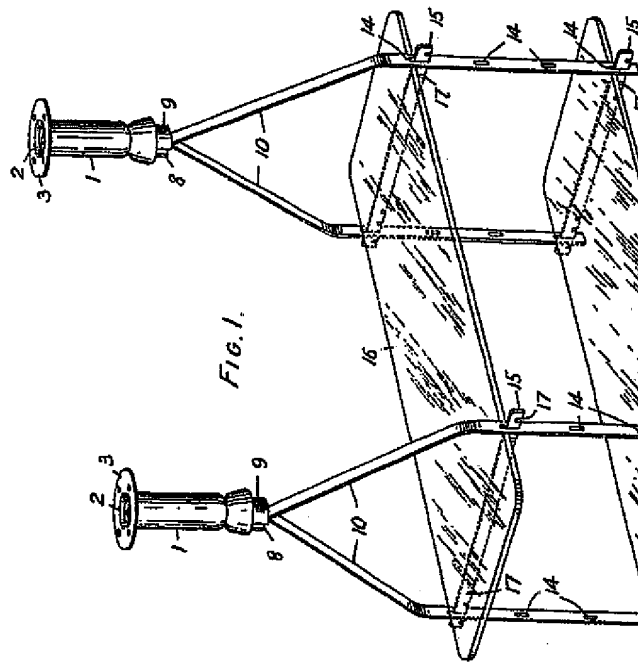


Fig. 1.

Fig. 2.

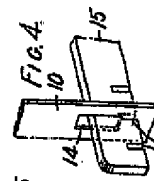
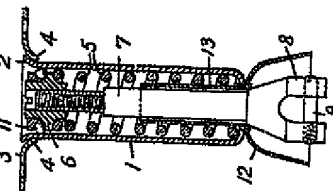


Fig. 3.



Fig. 4.

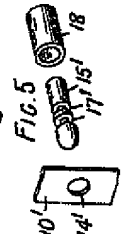


Fig. 5.

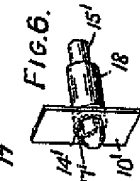


Fig. 6.

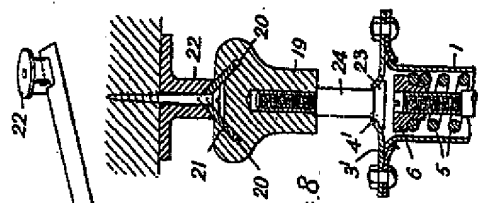


Fig. 7.



Fig. 8.

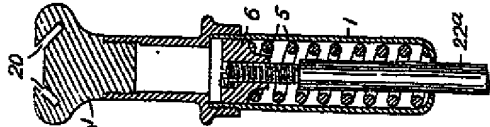


Fig. 9.

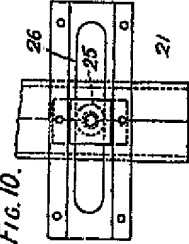


Fig. 10.

[This Drawing is a reproduction of the Original on a reduced scale.]

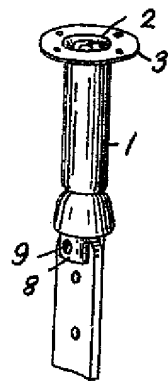


Fig. 12.

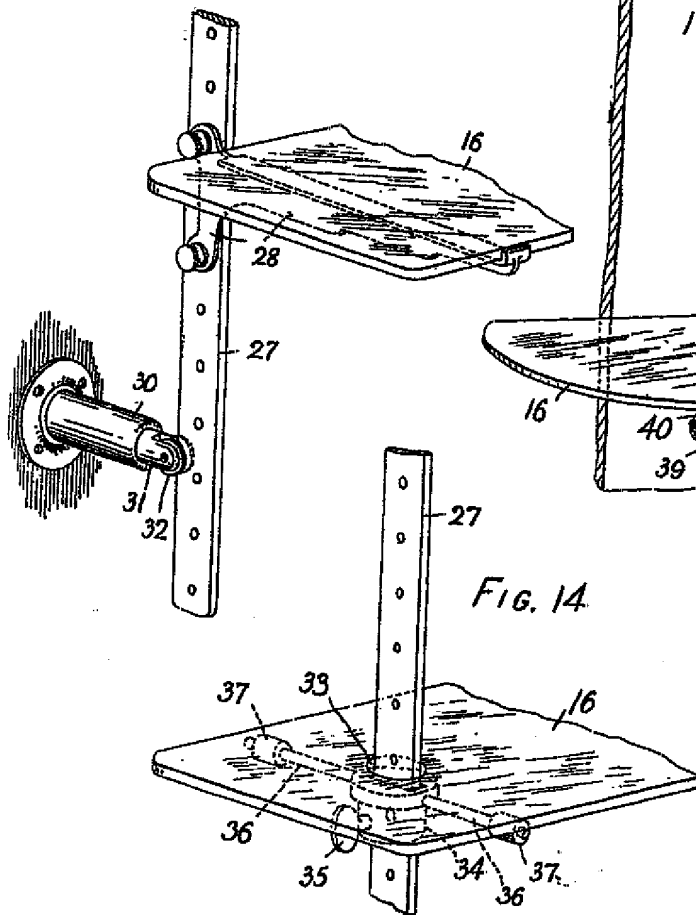


Fig. 14

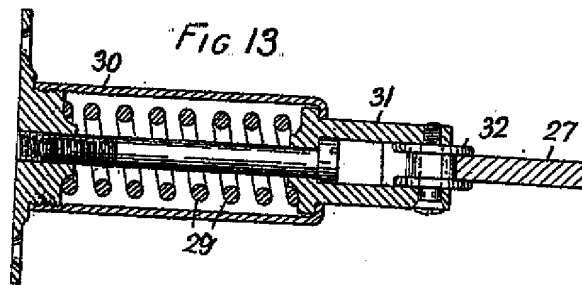


Fig. 13

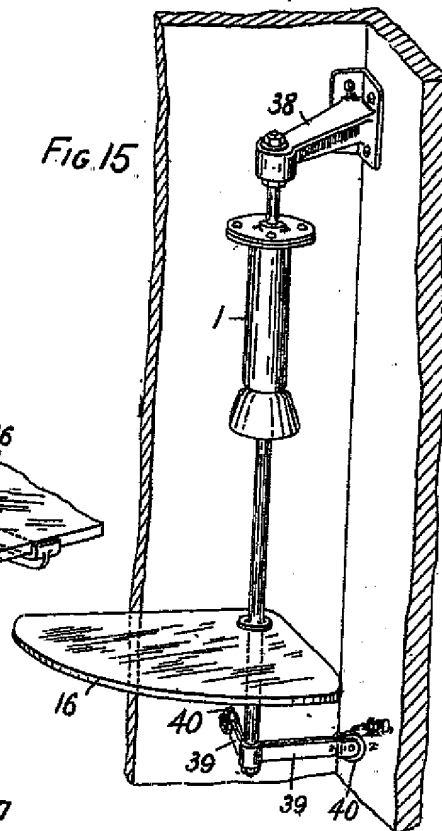


Fig. 15.